



Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A vacuum processing apparatus comprising:
 - a cassette table for mounting at least one cassette on a plane, each cassette capable of storing at least a dummy sample in the atmosphere;
 - a load lock chamber for storing said dummy sample and changing-over from the atmosphere to the vacuum condition, or from the vacuum condition to the atmosphere;
 - a first transferring device having an extensible arm capable of vertical operation and rotatable operation and a scooping device for taking out said dummy sample from any one of a plurality of cassettes, and transferring it to said load lock chamber or transferring it from said load lock chamber to said one cassette;
 - a transferring chamber for transferring said dummy sample in a vacuum condition;
 - a plurality of vacuum processing chambers connected to said transferring chamber through a gate valve and into which said dummy sample may be provided one by one in a vacuum condition;
 - a second transferring device arranged in said transferring chamber, having an extensible arm capable of rotatable operation, for transferring said dummy sample between said load lock chamber and said plurality of vacuum processing chambers;
 - a first support member arranged in said load lock chamber so as to support said dummy sample one by one;

a second support member arranged in each of said plurality of processing chambers so as to support said dummy sample one by one;

a first sample lifting mechanism capable of moving up or moving down said first supporting member so as to transfer said dummy sample to said second transferring device, and a second sample lifting mechanism arranged at said second support member in each of said processing chambers; and

a controller for controlling

(a) receiving of said dummy sample on said scooping-up device of said first transferring device by inserting said scooping-up device of said first transferring device under a bottom surface of said dummy sample to be taken out of said one cassette and by lifting said scooping-up device,

(b) transferring of said dummy sample received on said scooping-up device of said first transferring device to said first support member by said first transferring device,

(c) transferring of said dummy sample to said second transferring device by operating said first sample lifting mechanism, and

(d) transferring of said dummy sample by said second transferring device to said second support member in any one of said processing chambers and transferring of said dummy sample to said second support member by operating the second sample lifting mechanism.

2. (Previously Presented) The vacuum processing apparatus according to claim 1,

wherein the apparatus comprises a detecting device for detecting a position of said dummy sample and

said controller controls each of said controlling operations (a)-(d) under application of an output from said detecting device.

3. (Previously Presented) The vacuum processing apparatus according to claim 1, wherein said load lock chamber comprises a load side load lock chamber for transferring said dummy sample from the atmosphere to the vacuum, and an unload side load lock chamber for transferring said dummy sample from the vacuum to the atmosphere, wherein a plurality of said first support members is provided, and each of said plurality of first support members is arranged in each of said load side load lock chamber and unload side load lock chamber.

4. (Previously Presented) The vacuum processing apparatus according to claim 1, further comprising a dummy sample used for checking for a number of foreign particles.

5. (Currently Amended) The vacuum processing apparatus according to claim 1, further comprising dummy a sample is used for a cleaning process of said processing chamber.

6. (Previously Presented) The vacuum processing apparatus according to claim 1, wherein said cassette table enables mounting of a plurality of cassettes on a plane.

7. (Canceled).

8. (Canceled).

9. (Canceled).
10. (Canceled).
11. (Canceled).
12. (Previously Presented) A vacuum processing apparatus comprising:
 - a cassette table for mounting at least one cassette on a plane, each a cassette capable of storing at least a dummy sample in the atmosphere;
 - a load lock chamber for storing said dummy sample and changing-over from the atmosphere to the vacuum condition, or from the vacuum condition to the atmosphere;
 - a first transferring device having an extensible arm capable of vertical operation and rotatable operation and a scooping device for taking out said dummy sample from any one of a plurality of cassettes, and transferring it to said load lock chamber or transferring it from said load lock chamber to said one cassette;
 - a transferring chamber for transferring said dummy sample in a vacuum condition;
 - a plurality of vacuum processing chambers connected to said transferring chamber through a gate valve and into which said dummy sample may be provided one by one in a vacuum condition;
 - a second transferring device arranged in said transferring chamber, having an extensible arm capable of rotatable operation, for transferring said dummy sample between said load lock chamber and said plurality of vacuum processing chambers;
 - a first support member arranged in said load lock chamber so as to support said dummy sample one by one;
 - a second support member arranged in each of said plurality of processing

chambers so as to support said dummy sample one by one;

a first sample lifting mechanism capable of effecting relative vertical movement between said first support member and said second transferring device so as to transfer said dummy sample between said first support member and said second transferring device;

a second sample lifting mechanism capable of effecting relative vertical movement between said second support member and said second transferring device so as to transfer said dummy sample between said second support member and said second transferring device; and

a controller for controlling

(a) receiving of said dummy sample on said scooping-up device of said first transferring device by inserting said scooping-up device of said first transferring device under a bottom surface of said dummy sample to be taken out of said one cassette and by lifting said scooping-up device,

(b) transferring of said dummy sample received on said scooping-up device of said first transferring device to said first support member by said first transferring device,

(c) transferring of said dummy sample to said second transferring device by operating said first sample lifting mechanism, and

(d) transferring of said dummy sample by said second transferring device to said second support member in any one of said processing chambers and transferring of said dummy sample to said second support member by operating the second sample lifting mechanism.

13. (Canceled)

14. (Previously Presented) A vacuum processing apparatus comprising:
- a cassette table for mounting at least one cassette on a plane, each cassette capable of storing at least a dummy sample in the atmosphere;
 - a load lock chamber for storing said dummy sample and changing-over from the atmosphere to the vacuum condition, or from the vacuum condition to the atmosphere;
 - a first transferring device having an extensible arm capable of vertical operation and rotatable operation and a scooping device for taking out said dummy sample from any one of a plurality of cassettes, and transferring it to said load lock chamber or transferring it from said load lock chamber to said one cassette;
 - a plurality of vacuum processing chambers into which said dummy sample may be provided one by one in a vacuum condition;
 - a second transferring device having an extensible arm capable of rotatable operation, for transferring said dummy sample between said load lock chamber and one of said plurality of vacuum processing chambers;
 - a first support member arranged in said load lock chamber so as to support said dummy sample one by one;
 - a second support member arranged in each of said plurality of processing chambers so as to support said dummy sample one by one;
 - a first sample lifting mechanism capable of moving up or moving down said first support member so as to transfer said dummy sample to said second transferring device, and a second sample lifting mechanism arranged at said second support member in each of said processing chambers; and
 - a controller for controlling

(a) receiving of said dummy sample on said scooping-up device of said first transferring device by inserting said scooping-up device of said first transferring device under a bottom surface of said dummy sample to be taken out of one cassette and by lifting said scooping-up device,

(b) transferring of said dummy sample received on said scooping-up device of said first transferring device to said first support member,

(c) transferring of said dummy sample to said second transferring device by operating said first sample lifting mechanism, and

(d) transferring of said dummy sample from said second transferring device to said second support member in one of said processing chambers by operating the second sample lifting mechanism.

15. (Canceled).

16. (Canceled).

17. (Canceled).

18. (Canceled).

19. (Canceled).

20. (Previously Presented) The vacuum processing apparatus according to claim 1, wherein said controller further controls:

(e) processing in said processing chamber while a dummy sample is provided therein.

21. (Previously Presented) The vacuum processing apparatus according to claim 20, further comprising a dummy sample used for checking for a number of foreign particles in a vacuum processing portion of said vacuum processing apparatus.

22. (Previously Presented) The vacuum processing apparatus according to claim 20, further comprising a dummy sample used for a cleaning process of said processing chamber.

23. (Currently Amended) The vacuum processing apparatus according to claim 1, further comprising a dummy sample used for checking for a number of foreign particles in a vacuum processing portion of said vacuum processing apparatus.

24. (Previously Presented) The vacuum processing apparatus according to claim 12, wherein said controller further controls:

(e) processing in said processing chamber while said dummy sample is provided therein.

25. (Currently Amended) The vacuum processing apparatus according to claim 24, further comprising a dummy sample used for checking for a number of foreign particles in a vacuum processing portion of said vacuum processing apparatus.

26. (Previously Presented) The vacuum processing apparatus according to claim 24, further comprising a dummy sample used for a cleaning process of said processing chamber.

27. (Previously Presented) The vacuum processing apparatus according to claim 12, further comprising a dummy sample used for checking for a number of foreign particles in a vacuum processing portion of said vacuum processing apparatus.

28. (Canceled).

29. (Canceled).

30. (Canceled).

31. (Canceled).

32. (Previously Presented) The vacuum processing apparatus according to claim 14, wherein said controller further controls:

(e) processing in said processing chamber while said dummy sample is provided therein.

33. (Previously Presented) The vacuum processing apparatus according to claim 32, further comprising a dummy sample used for checking for a number of foreign particles in a vacuum processing portion of said vacuum processing apparatus.

34. (Previously Presented) The vacuum processing apparatus according to claim 32, further comprising a dummy sample used for a cleaning process of said processing chamber.

35. (Previously Presented) The vacuum processing apparatus according to claim 14, further comprising a dummy sample used for checking for a number of foreign particles in a vacuum processing portion of said vacuum processing apparatus.